



Major Components of Home Entertainment Control System

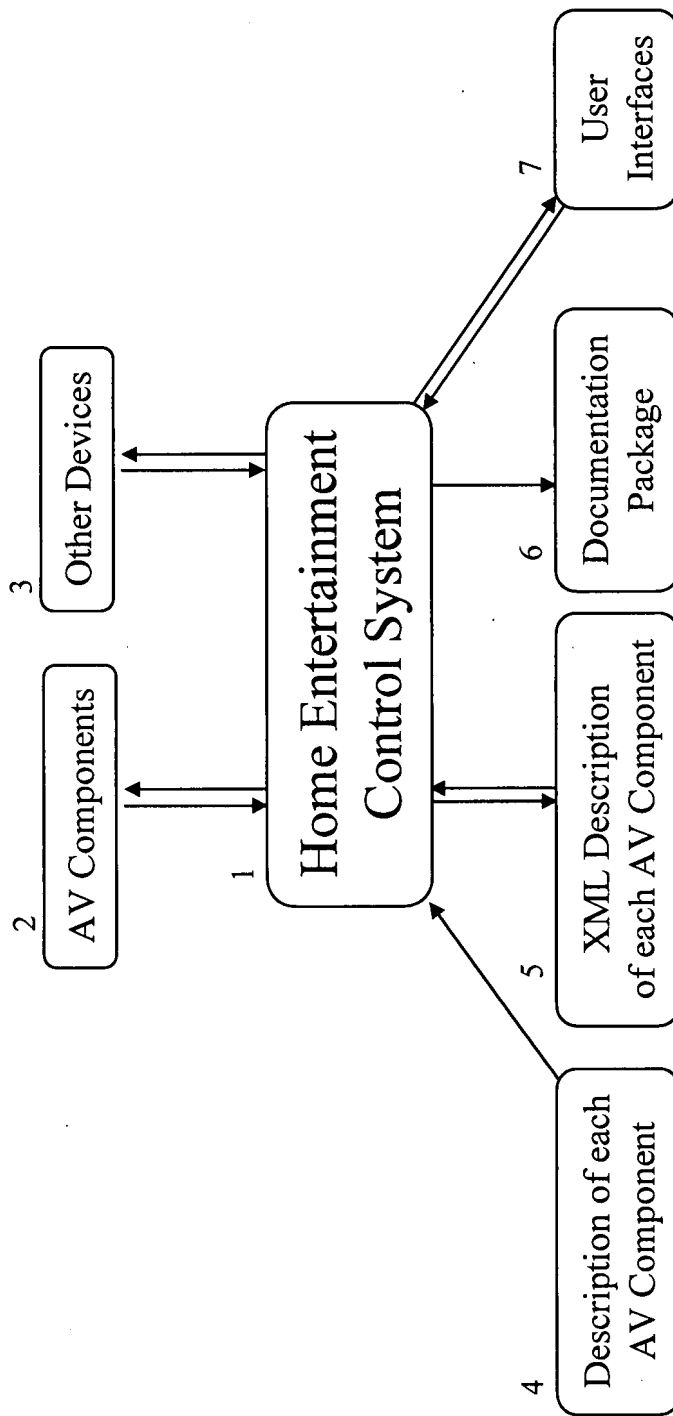


Figure 1



Home Entertainment Control System Controller

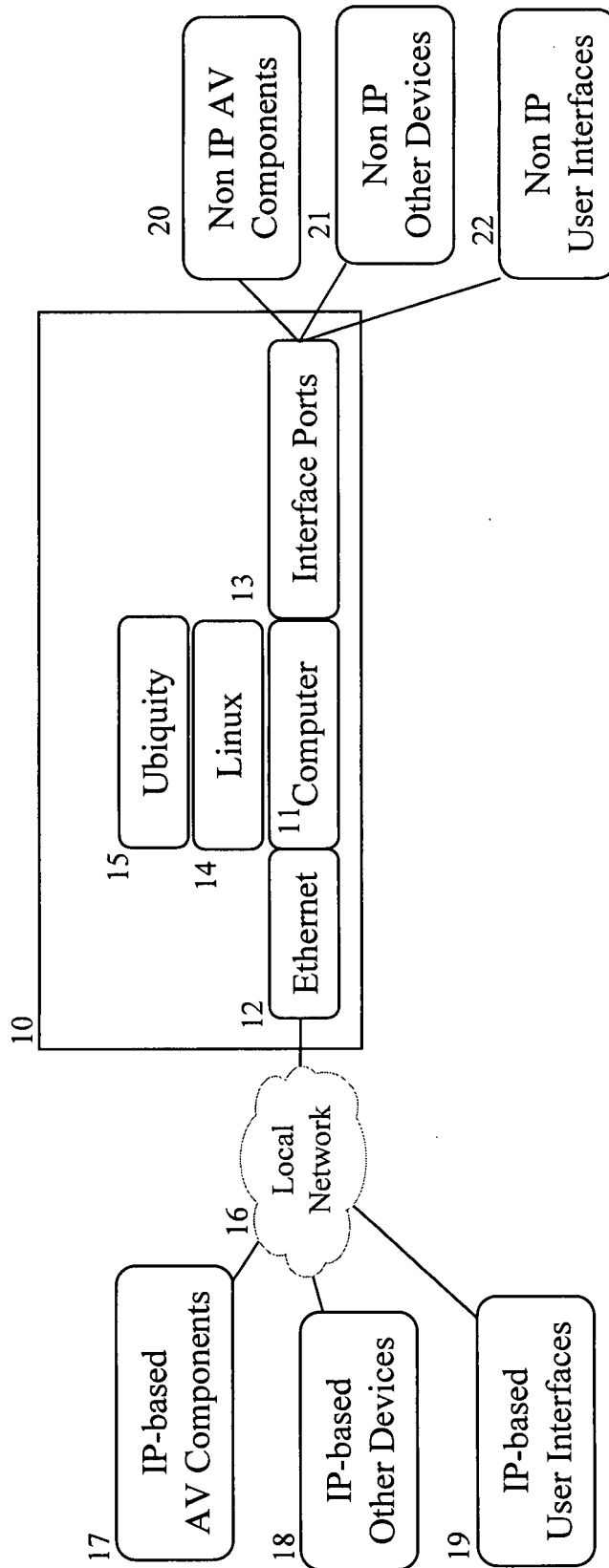


Figure 2



DDW Make and Model

New AV Component Wizard: Make & Model

File Help

Select the type of component you would like to create:

AV Surround receiver	CD	Cable set top box	DVD
Game Console	MP3	Microphone	PVR
Satellite TV	Speaker	Splitter	Switch
	Tuner	VCR	Video Processor

Manufacturer: Denon

Model: AVR5803

Copy attributes from: Browse

Manufacturer's suggested list price: \$1,200

Dimensions (inches):

Height	7.0	Width	17.25	Depth	14.0
--------	-----	-------	-------	-------	------

Power dissipation (watts):

Active	50	Standby	5
--------	----	---------	---

Make & Model

< Back Next > OK Cancel

Figure 3



DDW Input Connector Groups

New AV Component Wizard: AV Input Connector Groups

File Help

Number of AV input connector groups: 24

Name	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7	Input 8	Input 9	Input 10	Input 11	Input 12
Coax digital	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Optical digital	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analog audio	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Speaker level	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DVI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HD VGA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
VGA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Component	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
S-Video	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Composite ...	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1394	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
USB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RF	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
antenna	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ethernet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

AV Input Connector Groups

< Back Next > OK Cancel

Figure 4



DDW Assignable Input Ports

New A/V Component Wizard: Assignable Input Ports

File Help

Number of assignable input ports: 11

Name	CD	DBS/SAT	DVD	Phono	TV	Tape 1	Tape 2	Tuner	V Aux	VCR 1	VCR 2	VCI
Coax 1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Coax 2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Coax 3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Coax 4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Coax 5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Optical 1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Optical 2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Optical 3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Optical 4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Optical 5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Optical 6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Assignable Input Ports

Back Next OK Cancel

Figure 5



DDW A/V Output Connector Groups

New A/V Component Wizard: A/V Output Connector Groups

File Help

Number of A/V output connector groups: 9

Name	Output 1 Speaker	Output 2 MZone 1	Output 3 MZone 2	Output 4 VCR 1	Output 5 VCR 2	Output 6 VCR 3	Output 7 Mon 1	Output 8 Mon 2	Output 9 Surround
Coax digital	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Optical digital	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analog audio	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Speaker level	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DVI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HD VGA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
VGA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Component	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
S-Video	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Composite ...	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1394	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
USB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RF	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
antenna	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ethernet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is Multizone	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

AV Output Connector Groups

< Back Next > OK Cancel

Figure 6



DDW Volume Control

New A/V Component Wizard: Volume Control

File Help

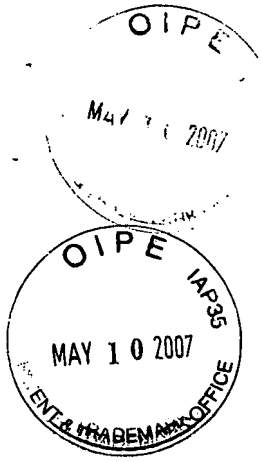
☒ This component controls audio volume

Minimum Volume Setting	-80
Maximum Volume Setting	10
Volume Step	0.5
Volume is in units of	dB

Volume Control

< Back Next > OK Cancel

Figure 7



DDW Controlled By

New AV Component Wizard: Controlled By

File Help

Specify all the ways this component can be controlled.
Specify the most complete control mechanisms first.

IR External
RS-232 DB-25 Female
none

Controlled By

Next > < Back OK Cancel

Figure 8



DDW IR Options

New AV Component Wizard: IR Options

File Help

There are 3 ways to assign IR commands. You can use any combination of these ways.

1. Import the IR commands from an existing component or file.
2. Cut and paste the hexadecimal encoding of the IR command.
3. Capture the commands from the remote control.

Some AV components have multiple sets of IR codes so that multiple components of the same type can be controlled by the same remote controller. If this component has multiple code sets you will want to make multiple passes through the IR learning section of this wizard and you may want to go back a few steps and add a switch to correspond with the code set selection.

Do not convert files whereby such conversion would violate any laws, license agreements or intellectual property rights of others.

This component has set of IR codes

IR Options

Back Next > OK Cancel

Figure 9



DDW IR Import

New AV Component Wizard: IR Import

File Help

Import IR codes from another component and/or from an existing file of codes: Import...

Destiny Commands	Associated IR Commands	Un Associated IR Commands
power		Analog
power on	Power On	Band
power off	Power Off	Ch Select
mute	Mute	DSP Simu
mute on		Dimmer
mute off		Direct
volume up	Volume Up	Ext In
volume down	Volume Down	Input Mode
bass up		M-Zone 1 On/Off
bass down		M-Zone1-CD
treble up		M-Zone1-DBS/SAT
treble down		M-Zone1-DVD
tone up		M-Zone1-Phono
tone down		M-Zone1-TV
select input toggle		M-Zone1-Tape-1
select nothing		M-Zone1-Tape-2
select CD input	CD	M-Zone1-Tuner
select DBS/SAT input	DBS/SAT	M-Zone1-VAux
select DVD input	DVD	M-Zone1-VCR1
select Phono input	Phono	

Configuring Multi-command sequences

IR Import

< > Delete Rename

< Back Next > OK Cancel

Figure 10





DDW IR Testing

New A/V Component Wizard: Ir Testing

File Help

Test the IR commands		Test Setup	
power on	Controller	d5k_E015	Refresh
power off	IR output port	IR Output Port 6	
power on, power off	Power sense port	Powersense Port 6	
power off, power on	Power sense mode	Video	
power on	Power sense status	off	
power off	Power sense power on delay		
mute	Power sense power off delay		
volume up			
volume down			
select CD input			
select DBS/SAT input			
select DVD input			
select Phono input			
select TV input			
select Tape 1 input			
select Tape 2 input			
select Tuner input			
select V Aux input			
select VCR 1 input			
select VDP input			
channel down			

Test	Passed	Failed	Reset
Passed & Send Next Command			

Ir Testing

Back Next OK Cancel

Figure 12



DDW RS232 Connection

New AV Component Wizard: RS232 Connection

File Help

Baud Rate	9600
Data Bits	8
Parity	none
Stop Bits	1
Flow Control	
Delay Between bytes	ms
<input type="checkbox"/> This device groups commands	
Grouped Commands Separator	

RS232 Connection

< Back Next > OK Cancel

Figure 13



DDW RS232 Commands

New AV Component Wizard: RS232 Commands

File Help

Write command

- power on
- power off
- mute on
- mute off
- volume up
- volume down
- select CD input
- select DBS/SAT input
- select DVD input
- select Phono input
- select TV input
- select Tape 1 input
- select Tape 2 input
- select Tuner input
- select V Aux input
- select VCR 1 input
- select VCR 2 input
- select VCR 3 input
- select VDP input
- MZone 1 power on
- MZone 1 power off
- MZone 1 volume up
- MZone 1 volume down

RS232 Commands

< Back Next > OK Cancel

Figure 14



DDW Assign RS232 Commands

New AV Component Wizard: Assign RS232 Commands

File Help

Import RS232 Commands from another component		Import...
Destiny Commands	Associated RS232 Commands	
power		
power on	power on	
power off	power off	
mute		
mute on	mute on	
mute off	mute off	
volume up	volume up	
volume down	volume down	
bass up		
bass down		
treble up		
treble down		
tone up		
tone down		
select input toggle		
select nothing		
select CD input		select CD input
select DBS/SAT input		select DBS/SAT input
select DVD input		select DVD input

☐ Configuring Multi-command sequences

Un Associated RS232 Commands

RS232 Commands

Write command

Command sent to read data

Command sent to update setting

Assign RS232 Commands

< Back Next > OK Cancel

Figure 15



DDW Test RS232 Commands

New AV Component Wizard: Test RS232 Commands

File Help

Test the RS232 commands

power on
power off
mute on
mute off
volume up
volume down
select DBS/SAT input
select CD input
select DVD input
select Phono input
select TV input
select Tape 1 input
select Tape 2 input
select Tuner input
select V Aux input
select VCR 1 input
select VCR 2 input
select VCR 3 input
select VDP input
MZone 1 power on
MZone 1 power off

Controller

Serial output port

Command Result:

Test Setup

d5k_E015

Refresh

Bilger_Domain5000 Serial Port 1

Test

Passed

Failed

Reset

Passed & Send Next Command

Test RS232 Commands

Back

Next

OK

Cancel

Figure 16



DDW Transport

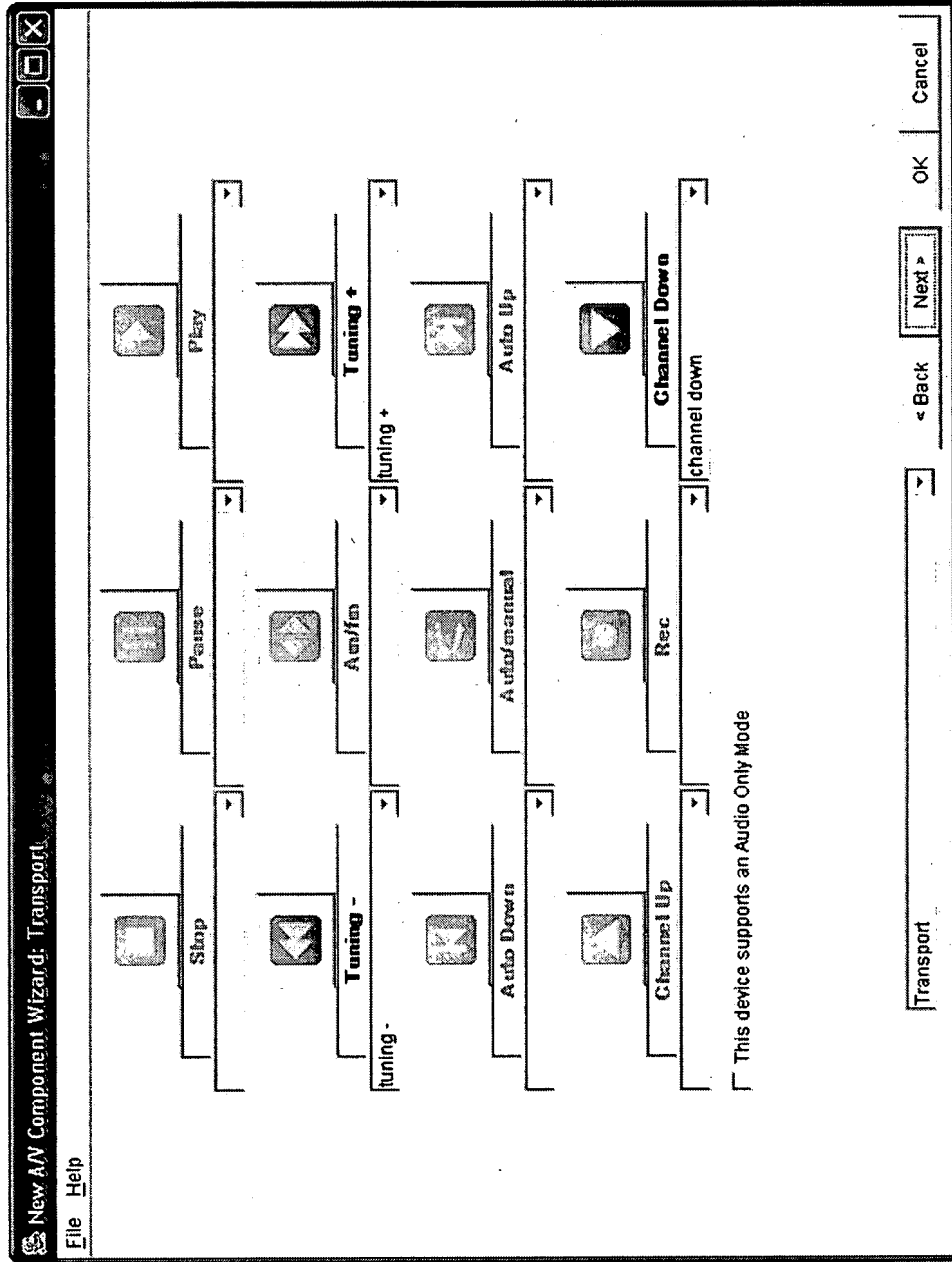


Figure 17



DDW Menu

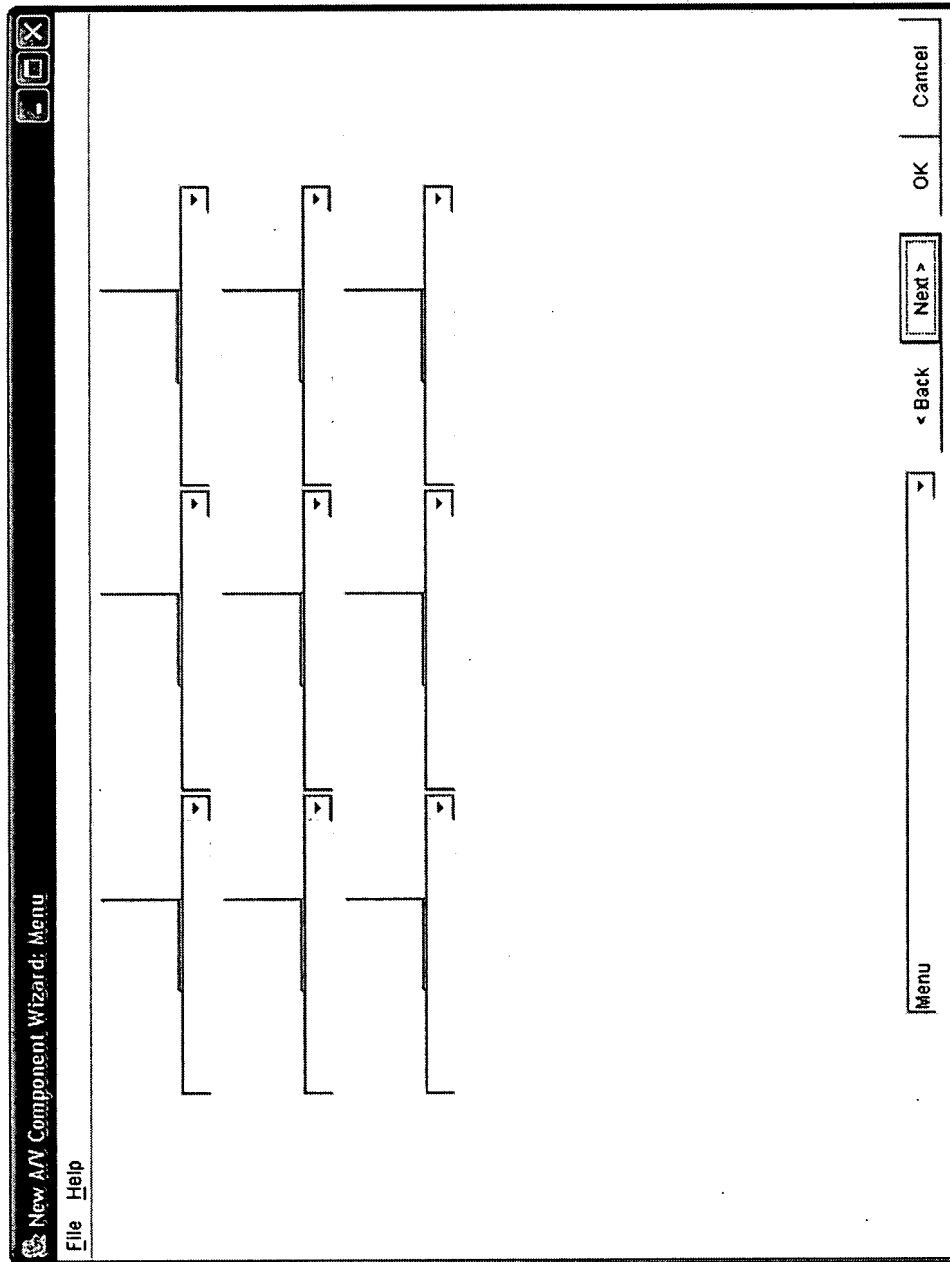


Figure 18



DDW Keypad

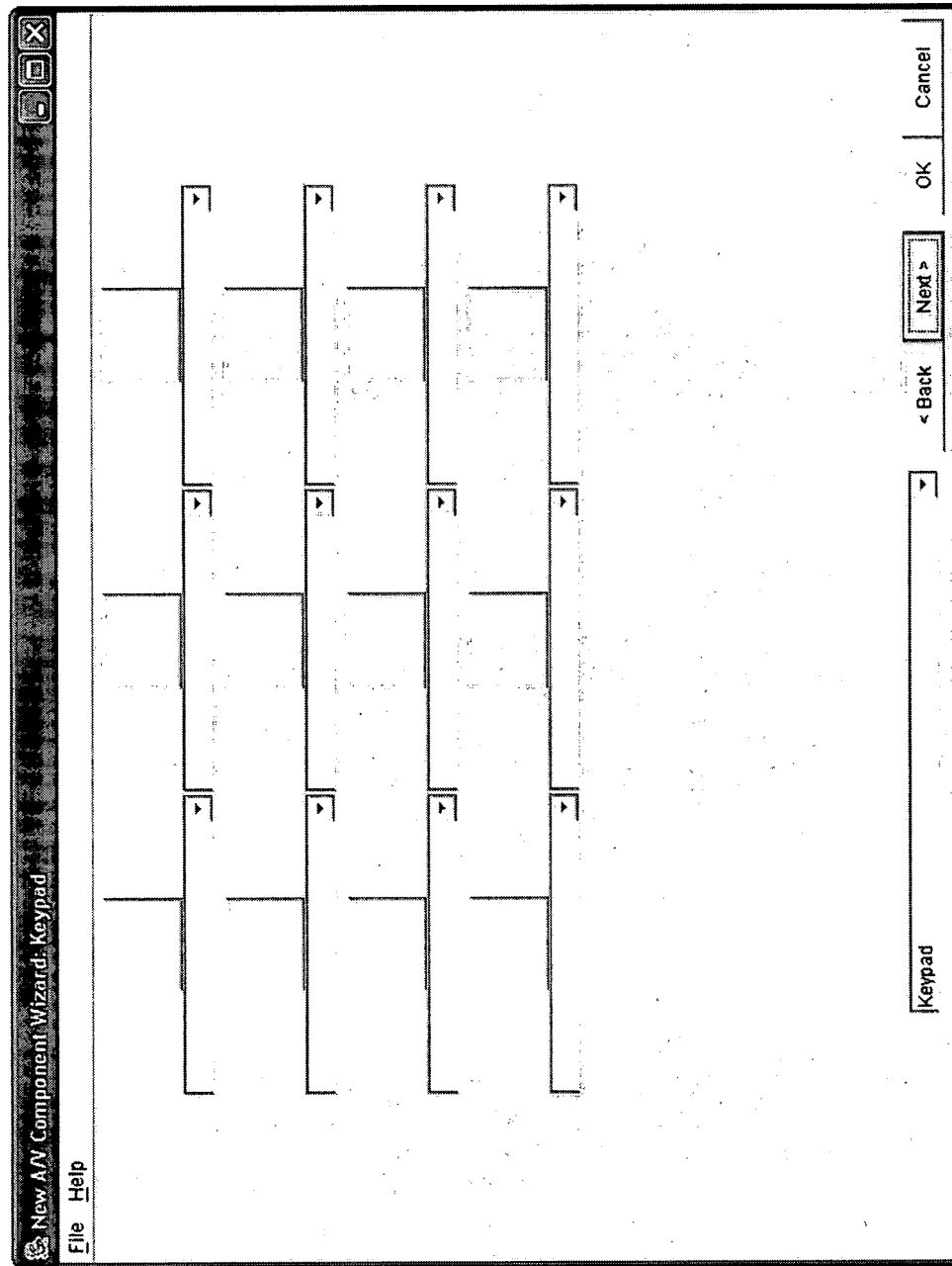


Figure 19



DDW You're Done!

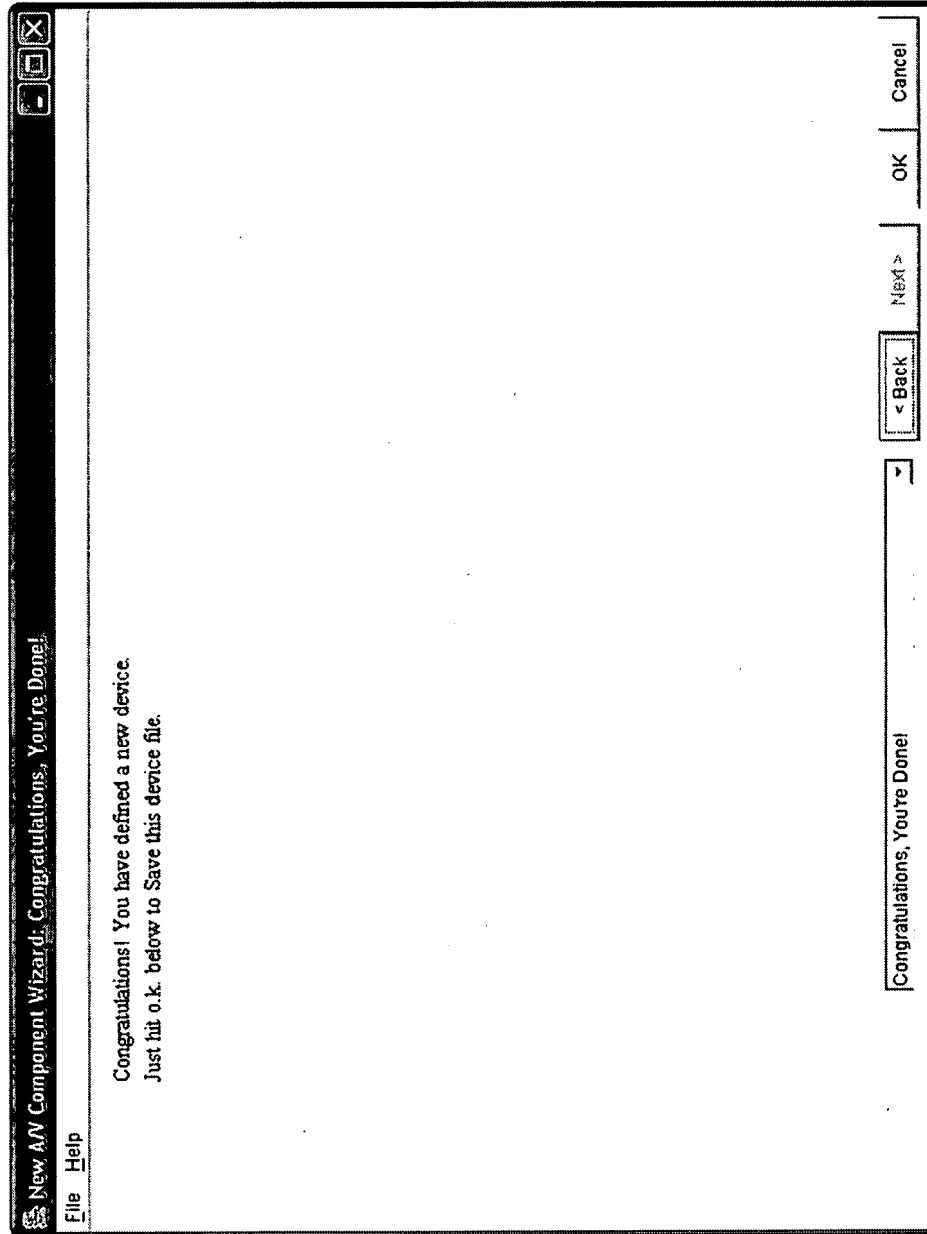


Figure 20



Design Module Floor Plan View

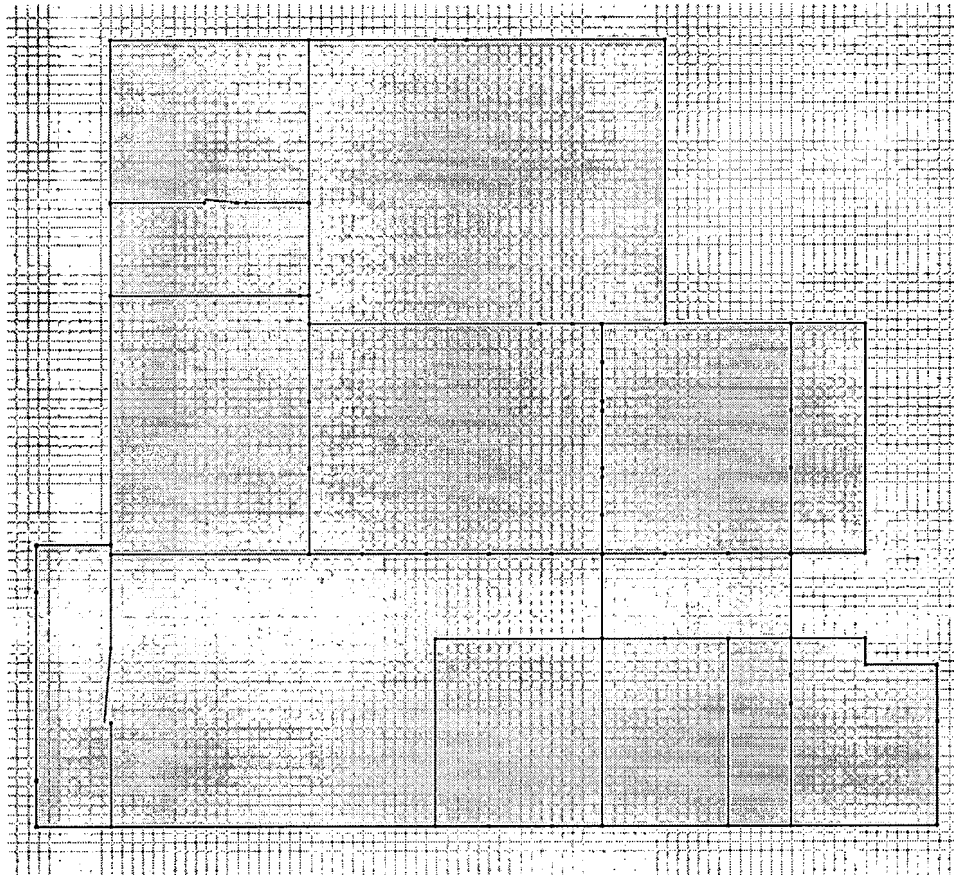


Figure 21



Design Module No AV Components Yet

Entertainment Devices in FamilyRoom

FamilyRoom

Done	Component	Video In	Video Out	Audio In	Audio Out	Power	Control

Add Component

Click a Component Name to Edit/Delete that Component
Or Click the Add Component Button Above to Add a New Component in this Room

Figure 22



Design Module Adding a VCR to the Family Room

A screenshot of a software dialog box titled "Add Component in FamilyRoom". The dialog has a close button (X) in the top right corner. It contains several fields and options:

- Type:** A dropdown menu with "VCR" selected. Above it are radio buttons for "Legacy" (selected) and "XML Files".
- Manufacturer:** A dropdown menu with "JVC" selected.
- Model:** A dropdown menu with "HR-A591U" selected.
- File Names:** A dropdown menu with "HR-A591U.xml" selected.
- Name:** A text field containing "FamilyRoom VCR".
- Name to be Displayed:** A text field containing "VCR". Below this field is the text "Maximum eight characters".
- On When Needed:** A radio button that is selected.
- Always On:** An unselected radio button.
- Power Not Controlled:** An unselected radio button.

At the bottom right of the dialog are two buttons: "Add" and "Cancel".

Figure 23



Figure 24



Design Module Adding a PVR to the Family Room



Add Component in FamilyRoom

☐ Legacy ☒ XML Files

Type

PVR

Manufacturer

ReplayTV

Model

RTV4000

File Names

RTV4000.xml

Name

FamilyRoom PVR

Name to be Displayed

PVR

Maximum eight characters

☒ On When Needed

☐ Always On

☐ Power Not Controlled

Add


Cancel

Figure 26

Application No.: 10/671,314
Inventor: Sprauve et al.
Filed: September 24, 2003 Art Unit: 2179
Docket No. 351963-990101
Page 27 of 48
Replacement Sheet



Design Module Adding a Surround Receiver to the Family Room


Add Component in FamilyRoom

☒ Legacy
☐ XML Files

Type	AV Surround receiver
Manufacturer	Denon
Model	AVR-1802
File Names	AVR-1802.xml
Name	Denon AV Surround receiver
Name to be Displayed	AV Surround receiver

Maximum eight characters

☒ On When Needed
 ☐ Always On

☒ Power Not Controlled
 ☐ Power Controlled

Add
Cancel

Figure 27

Replacement Sheet

Figure 28

Figure 28



Design Module with All of the AV Components Added

Entertainment Devices in FamilyRoom

FamilyRoom

Done	Component	Video In	Video Out	Audio In	Audio Out	Power	Control
<input type="checkbox"/>	FamilyRoom VCR	0	0	0	0	0	0
<input type="checkbox"/>	FamilyRoom DVD	0	0	0	0	0	0
<input type="checkbox"/>	FamilyRoom Satellite	0	0	0	0	0	0
<input type="checkbox"/>	FamilyRoom PVR	0	0	0	0	0	0
<input type="checkbox"/>	FamilyRoom AV Surround r...	0	0	0	0	0	0
<input type="checkbox"/>	FamilyRoom TV	0	0	0	0	0	0

Add Component

Click a Component Name to Edit/Delete that Component
Or Click the Add Component Button Above to Add a New Component in this Room

Figure 29



Design Module DVD AV Input Ports

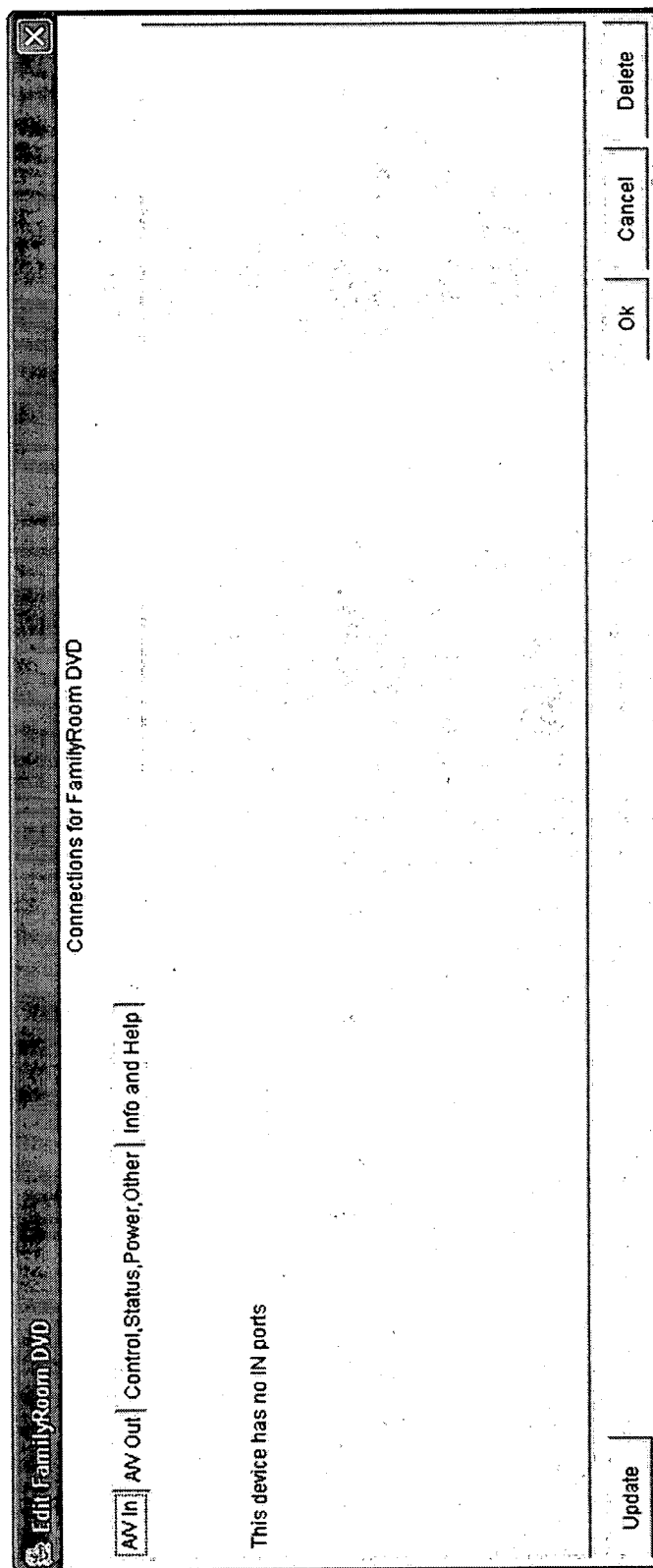


Figure 30



Design Module DVD AV Output Ports

FamilyRoom.DVD

Connections for FamilyRoom DVD

AV In AV Out Control>Status,Power,Other Info and Help

Out

Out

S-vid

Video

☒ Composite

☒ S-Video

☐ Component

FamilyRoom AV Surround receiver

FamilyRoom AV Surround receiver

DVDMDP

DVDMDP

Composite

S-Video

Component

Out vComposite, 1103 DVDMDP vComposite

D3 Dvd Out vS-Video, 1103 DVDMDP vS-Video

Wire Id

Audio

☒ Line stereo RCA

☐ SPDIF on Toslink

☐ SPDIF on RCA

FamilyRoom AV Surround receiver

DVDMDP

Line stereo RCA

SPDIF on Toslink

SPDIF on RCA

stereo RCA, 1103 DVDMDP allLine stereo RCA

Wire Id

Wire Id

Update

Ok

Cancel

Delete

Figure 31



Design Module DVD Control, Status, Power, Other Ports

Edit FamilyRoom DVD **Connections for FamilyRoom DVD**

AV In | AV Out | Control | Status | Power | Other | Info and Help |

Power On Policy
☐ As Needed ☐ Always On ☐ Power Not Controlled

☒ On Off Status
☐ Power Sensor on a shut
☐ Power Sensor on Domain 5000 ☐ D5K #1-Sync Input 1 ☐ High when On

☐ Turn Device ON/OFF using a Relay Control Unit
☐ D5K #1-Relay Control Unit ☐ Relay 1

☒ Control the device
☐ IR port on Domain 5000 ☐ D5K #1-IR Out Port 1

Update Ok Cancel Delete

Figure 32



Design Module Info and Help

Connections for FamilyRoom DVD

AV In | AV Out | Control, Status, Power, Other | Info and Help |

Name: FamilyRoom DVD On Line Manual

Display Name: DVD

Maximum eight characters

Mfg: RCA Model: RC6001P plus

XML File: RCA-RC6001P plus.xml

Serial #: 123456789 Date of Installation: 1/14/03

Warranty period: 12 in months

Dimensions

0.0 h	0.0 w	0.0 d
-------	-------	-------

Power Dissipation in Watts

Active	120	Standby	20
--------	-----	---------	----

Update Ok Cancel Delete

Figure 33



Design Module All AV Components with Wires

Entertainment Devices in: FamilyRoom

FamilyRoom

Done	Component	Video In	Video Out	Audio In	Audio Out	Power	Control
<input type="checkbox"/>	FamilyRoom VCR	0	1	0	1	0	0
<input type="checkbox"/>	FamilyRoom DVD	0	2	0	1	0	1
<input type="checkbox"/>	FamilyRoom Satellite	0	1	0	1	0	1
<input type="checkbox"/>	FamilyRoom PVR	1	0	1	0	0	1
<input type="checkbox"/>	FamilyRoom AV Surround r...	3	1	2	1	0	1
<input type="checkbox"/>	FamilyRoom TV	1	0	1	0	0	1

Add Component

Click a Component Name to Edit/Delete that Component
Or Click the Add Component Button Above to Add a New Component in this Room

Figure 34



Graphical User Interface Entertainment Off

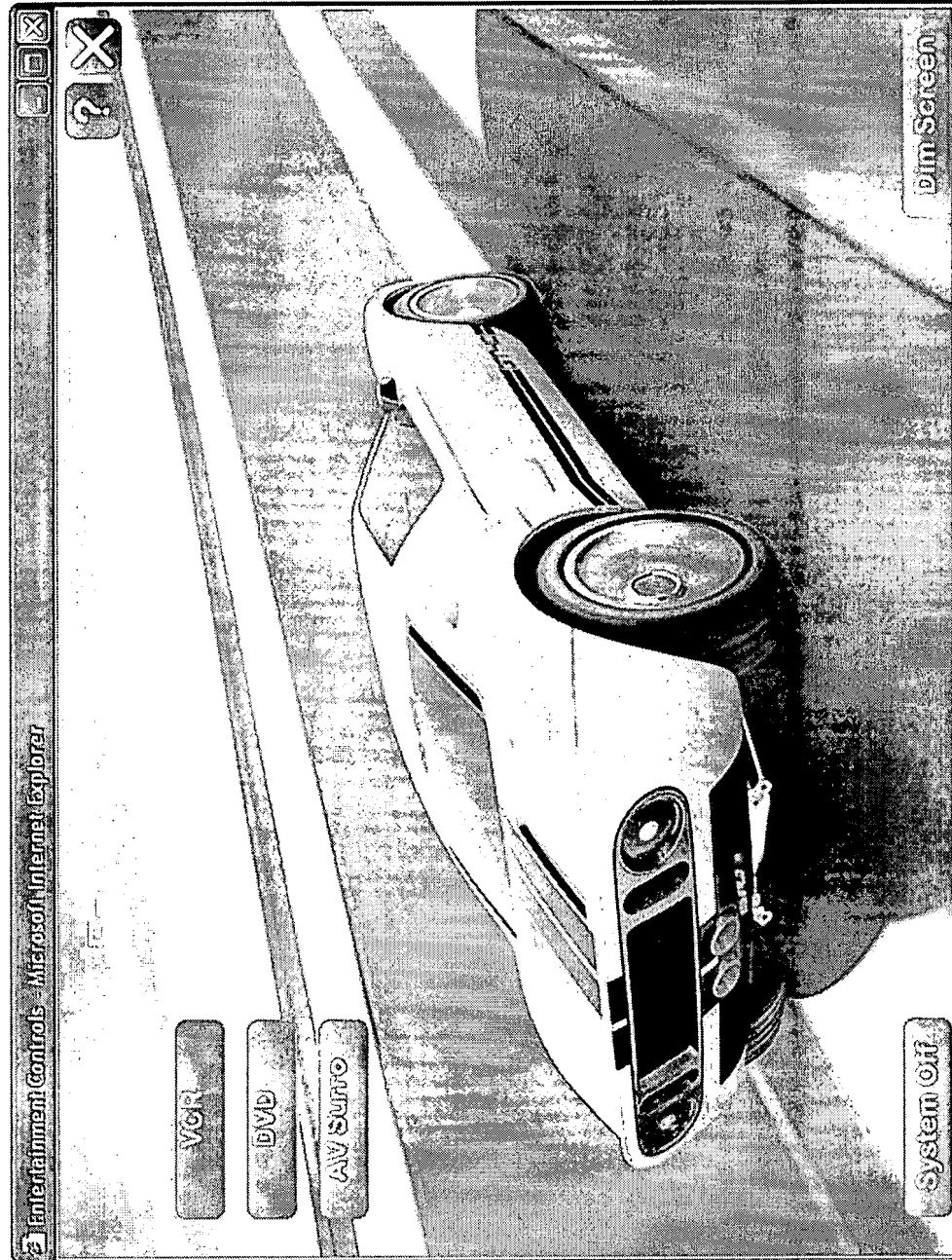


Figure 35



Graphical User Interface DVD is the Active Source

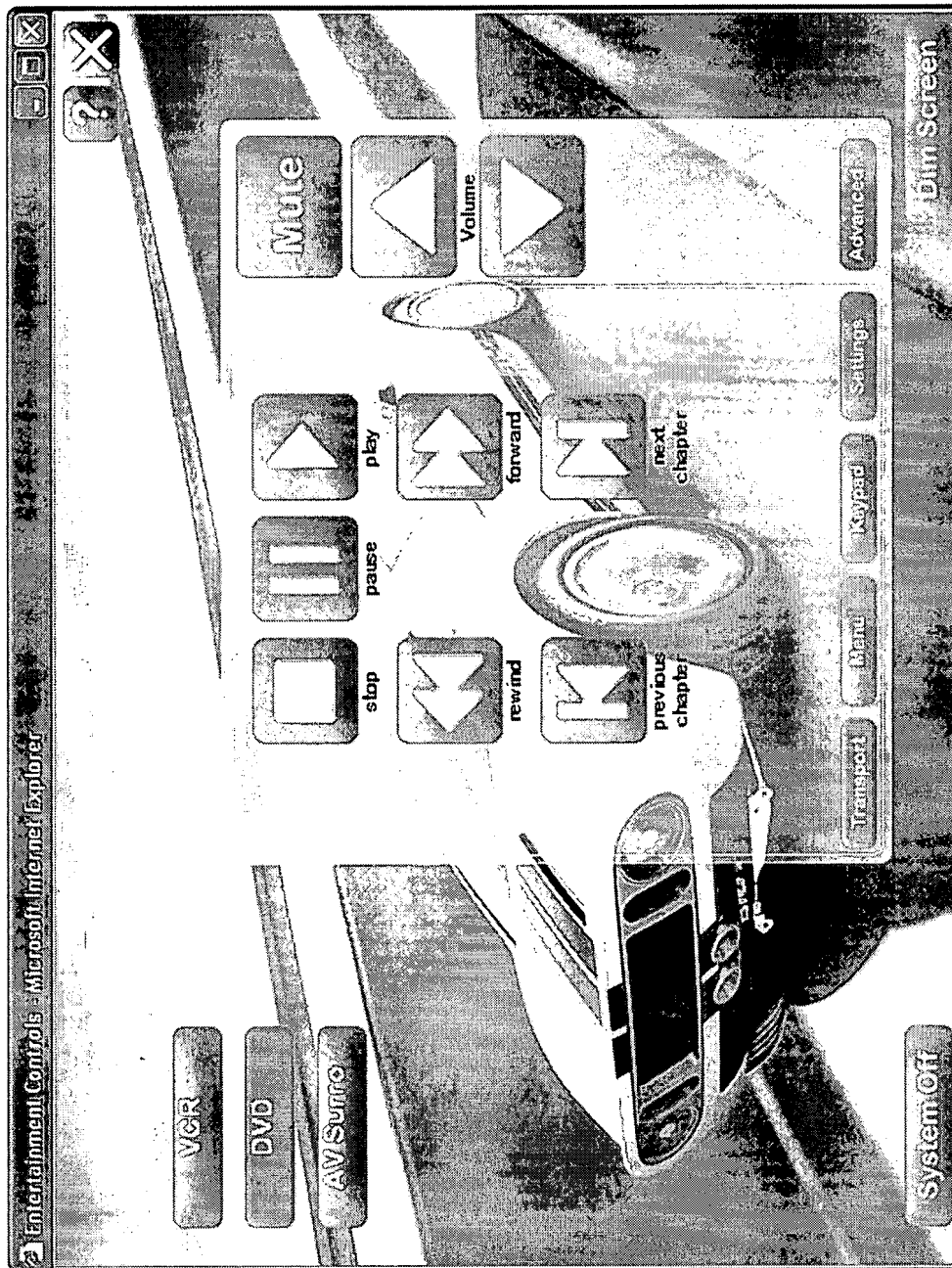


Figure 36

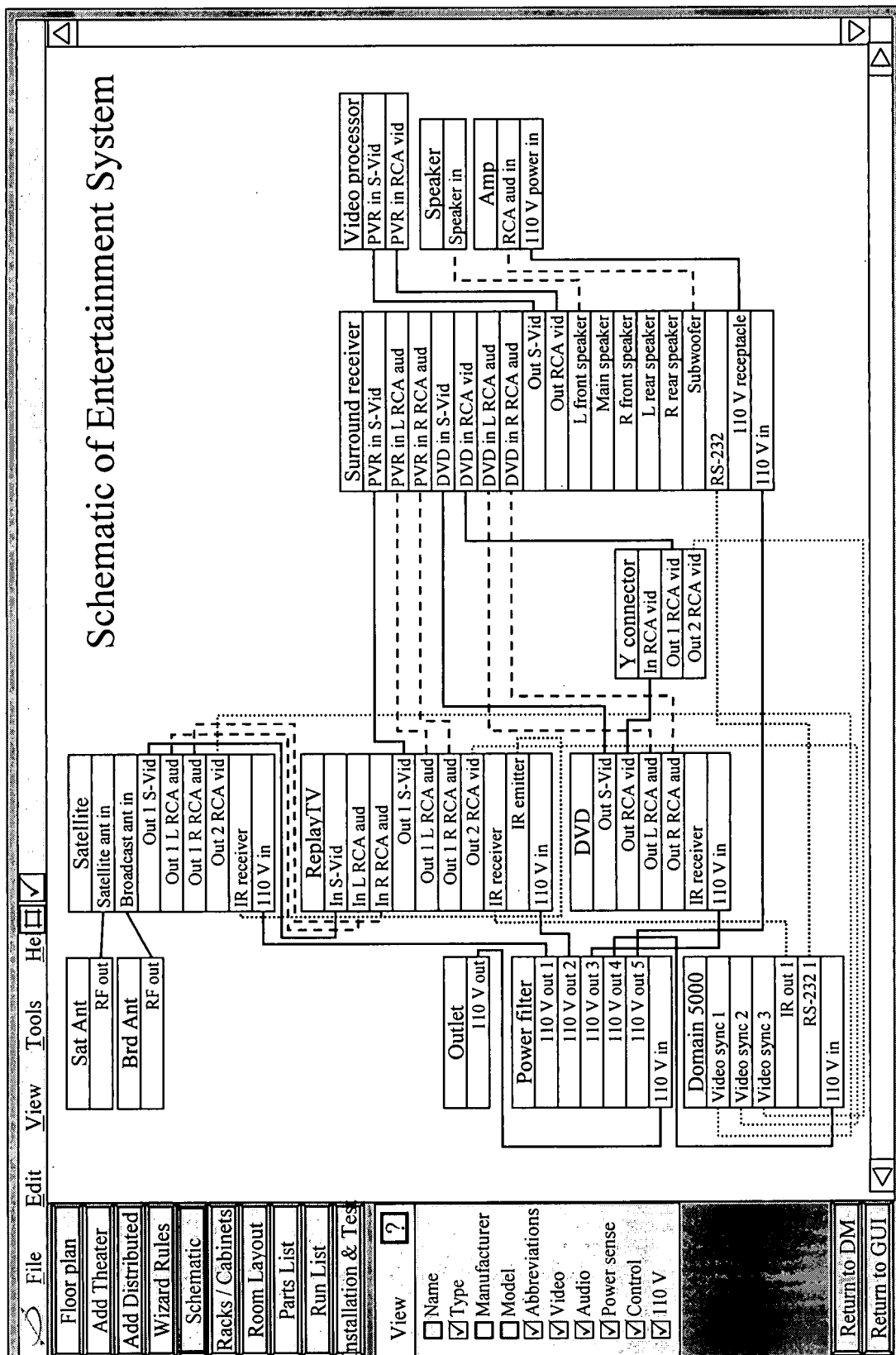


Figure 37



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View

☐ Name

☒ Type

☐ Manufacturer

☐ Model

☒ Abbreviations

☒ Video

☒ Audio

☒ Power sense

☒ Control

☒ 110 V

Return to DM

Return to GUI

Partial Parts List

Buy/Owned	Qty	Part number	Manufacturer	Model #	Description
Buy	1	PAN-DVD-200	Panasonic	DVD-200	Panasonic DVD player
Owned	1	Sony-VCR-100	Sony	VCR-100	Sony VCR
Stock	130/160 ft	Cable-S-Video	any	any	130 ft to 160 ft S-Video cable
Buy	72	Conn-Fm-S-Video	any	any	Female S-Video connectors

Figure 38



Run List

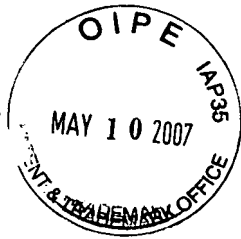
From the output of this component				To the input of this component			
Done	Action	Wire type	Name	Port	Name	Port	Wire length
<input checked="" type="checkbox"/>	Add	RG-6	Roof satellite antenna	Antenna out	Living room satellite receiver	Satellite antenna in	?
<input checked="" type="checkbox"/>	Add	RG-6	Roof broadcast antenna	Antenna out	Living room satellite receiver	Broadcast antenna in	?
<input checked="" type="checkbox"/>	Add	S-Vid	Living room satellite receiver	Out 1 S-Vid	Living room ReplayTV	In S-Vid	10" to 20"
<input checked="" type="checkbox"/>	Add	RCA aud	Living room satellite receiver	Out 1 L RCA aud	Living room ReplayTV	In L RCA aud	10" to 24"
<input checked="" type="checkbox"/>	Add	RCA aud	Living room satellite receiver	Out 1 R RCA aud	Living room ReplayTV	In L RCA aud	15" to 31"
<input checked="" type="checkbox"/>	Add	RCA vid	Living room satellite receiver	Out 2 RCA vid	Domain 5000	Video sync in	121" to 132"
<input type="checkbox"/>	Add	S-Vid	Living room ReplayTV	Out 1 S-Vid	Living room surround receiver	PVR in S-Vid	17" to 23"
<input type="checkbox"/>	Remove	S-Vid	Living room Replay TV	Out 2 S-Vid	Living room TV	S-Vid in 2	16" to 20"
etc							

Wire length calculations:
if the ports are in the same rack
then {
if the component with the output is above the one with the input
then {
shortest = <bottom height of the comp with the output> minus <the top height of the comp with the input> plus 6 inches
longest = sqrt ((<top height of the comp with the output> minus <the bottom height of the comp with the input>)^2 + 19^2) plus 6 inches
}
}
else ...
}
else {
shortest = <bottom height of the comp with the output> + <cabinet pull out wire extension> + <distance between cabinets> + <cabinet pull out wire extension> + <bottom height of the comp with the input> + 6
longest = 19 + <top height of the comp with the output> + <cabinet pull out wire extension> + <distance between cabinets> + <cabinet pull out wire extension> + <top height of the comp with the input> + 19 + 6
}
}

Output port
☒ Name
☐ Type
☐ Manufacturer
☐ Model
☒ Port
Input port
☒ Name
☐ Type
☐ Manufacturer
☐ Model
☒ Port

Figure 39





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Add Racks

?

X

Add Racks and/or Cabinets for A/V Components

Number of racks of equipment3

#1

Generic

Generic

Generic rack

41

72

24

48

0

#2

Generic

Generic

Generic rack

41

72

24

48

0

#3

Generic

Generic

Generic rack

41

72

24

48

0

Total number of rack spaces available123

Total number needed98

Extra rack spaces available25

From

To

Cable distance

from wire tray

to wire tray

between racks

#1

#1

#2

#2

#3

#3

#3

Distance

24

24

24

Defaults

OK

Cancel

Figure 41

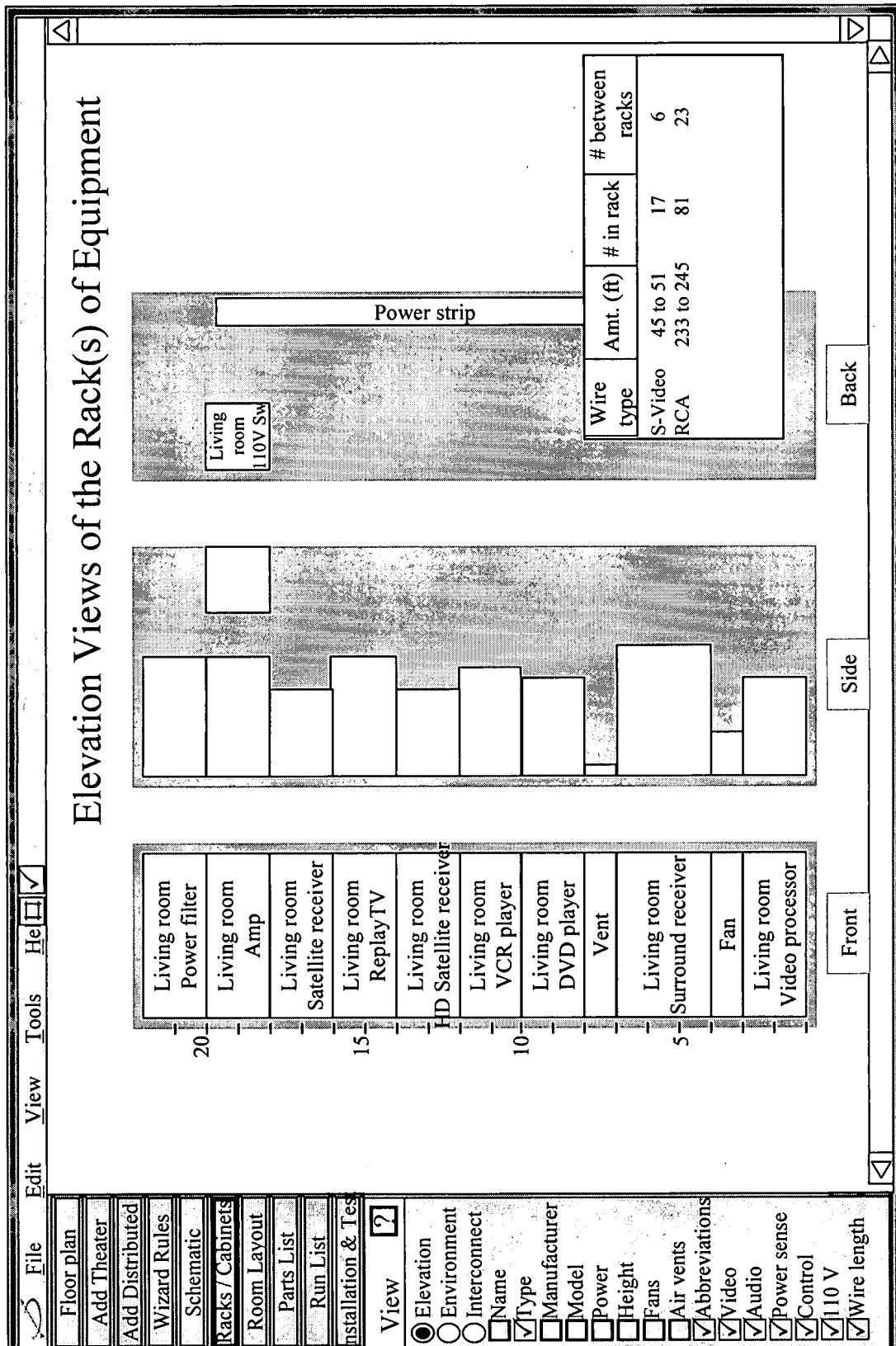
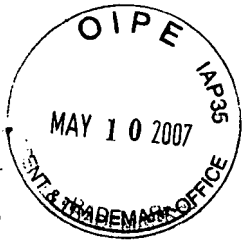


Figure 42



Multi-Rack Interconnect

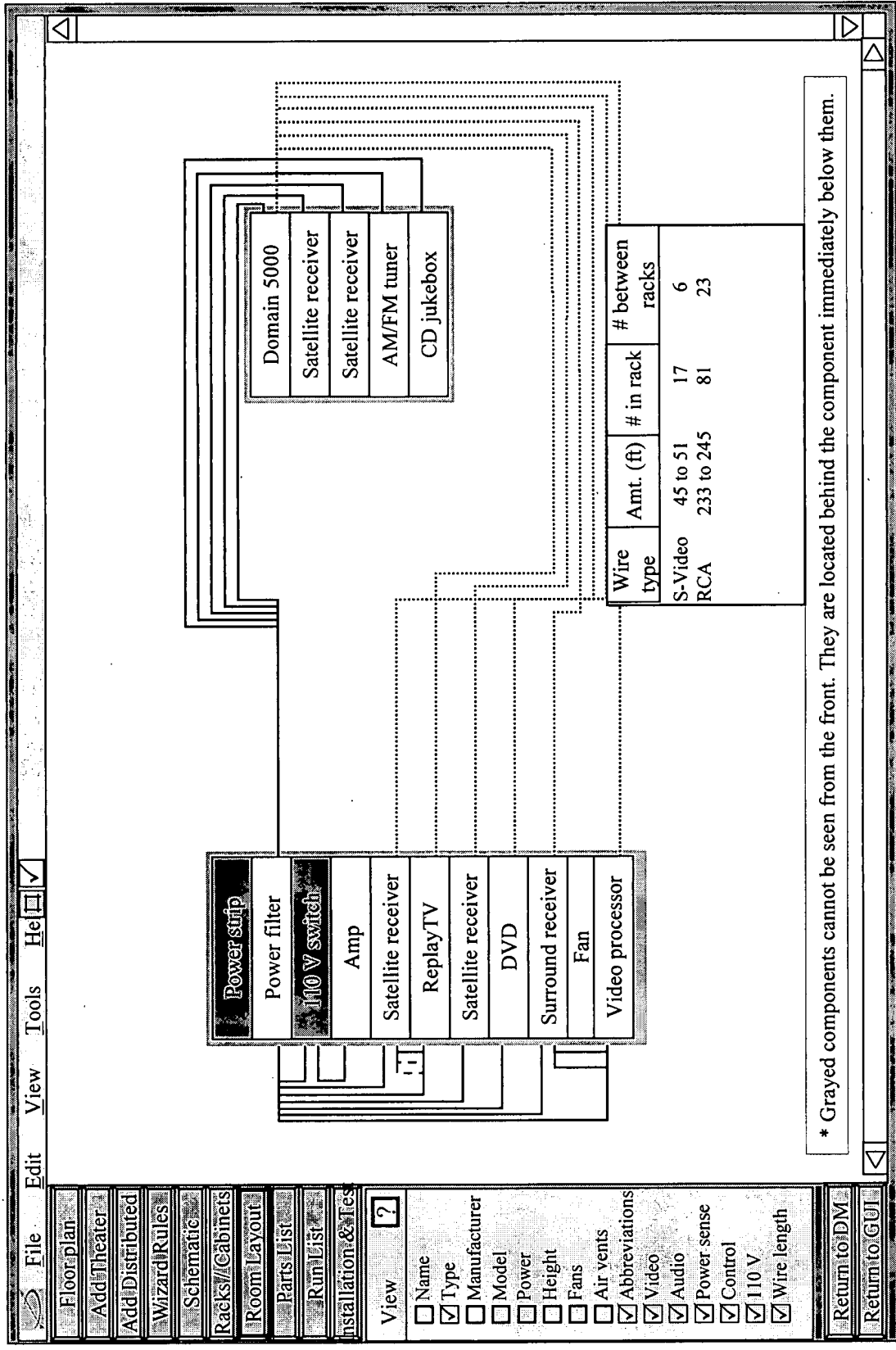
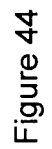
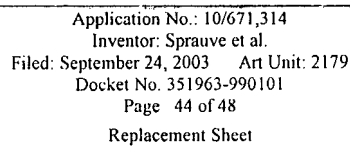


Figure 43



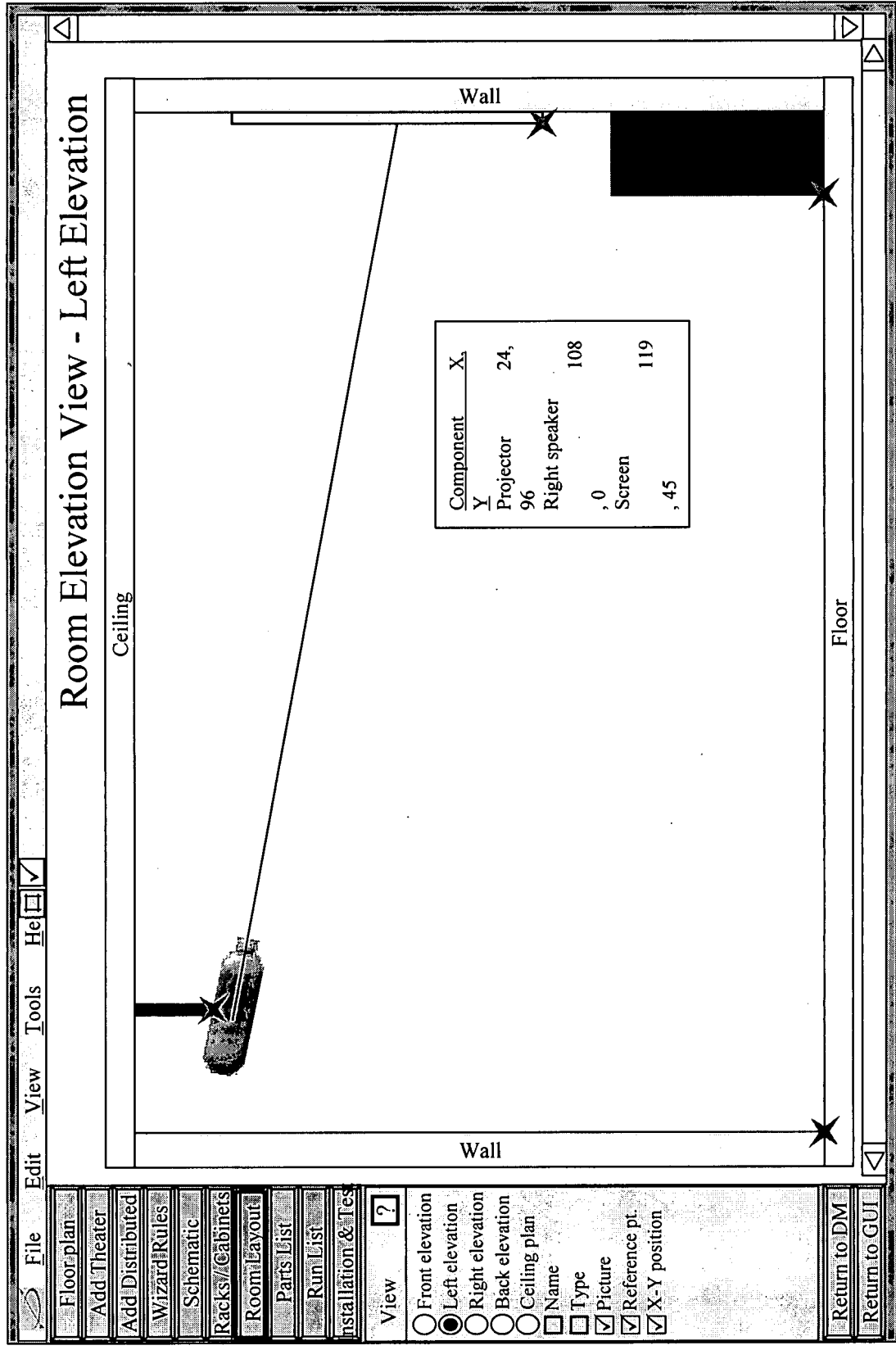


Figure 45



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Rules for Auto Wiring of A/V

?

?

X

Wire	Wire	Order of preferences
Always	When Needed	
	✓	Video via VGA
	✓	Video via Component
	✓	Video via S-Video
	✓	Video via Composite
	✓	Video via IP
✓	✓	Video via RF
	✓	Audio via coax digital
	✓	Audio via optical digital
	✓	Audio via Composite
	✓	Audio via RF
	✓	Audio via RF

Defaults

OK

Cancel

Figure 46



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Rules for 110V

Rules for Auto Wiring of 110V

?

X

Wire to		Components
Switched	Wire to Filtered	
	✓	Satellite receiver
	✓	Cable receiver
	✓	PVR
	✓	DVD player
	✓	VCR
	✓	CD jukebox
	✓	MP-3 music
	✓	A/V surround receiver
✓	✓	Subwoofer amp
✓	✓	Shaker amp
	✓	TV / projector / display
	✓	Video processor
		Projector screen

Defaults

OK

Cancel

Figure 47



File Edit View Tools Help ☒

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Rules for Physical Configuration

Rules for Auto Positioning of A/V Components in Racks

☒ ? ☒

- ☒ Place the DVD player inches above the floor
- ☒ Place the VCR player just above the DVD player
- ☒ Add a 1U vent above every component with power dissipation greater than watts
- ☒ Add a 1U fan below every component with power dissipation greater than watts
- ☒ Put the DVD player, VCR player, and A/V surround receiver in the same rack
- ☒ Minimize the number of wires between racks
- ☒ Minimize the length of S-Video wire
- ☒ Minimize the length of RCA wire
- ☒ Minimized the length of wire used
- ☒ Add component from the schematic from top to bottom and from left to right

Defaults OK Cancel

Figure 48